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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,755	11/13/2002	Mark C. Schmidt	108-181USA000	9831

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EXAMINER	
FUREMAN, JARED	
ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/042,755	SCHMIDT ET AL.	
	Examiner	Art Unit	
	Jared J. Fureman	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30 and 110-114* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30 and 110-114* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/25/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of the preliminary amendment and declaration, filed on 7/21/2003, and the IDS, filed on 8/25/2003, which have been entered in the file. Claims 1-30 and 110-114 are pending.

Drawings

1. The drawings are objected to because there are two figures labeled 5A and there are two figures labeled 5B (see sheet numbers 6, 11 and 12). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: There is no brief description of figures 7D, 7E, and 15E.

Appropriate correction is required.

Claim Objections

3. Claims 20, 29, and 114 are objected to because of the following informalities:

Re claim 20, line 2: the phrase "(or near)" renders the claim indefinite, since it is unclear as to whether "(or near)" is part of the claimed invention. For examination purposes, "(or near)" has not been considered. Also, "the" should be replaced with --a--, in order to avoid a lack of proper antecedent basis for "the perimeter".

Re claim 29:

Line 2, "provide" should be replaced with --provided--.

Line 3, "the" should be replaced with --a--, in order to avoid a lack of proper antecedent basis for "the user".

Claim 114, line 2: "(i.e. linear)" renders the claim indefinite, since it is unclear as to whether "(i.e. linear)" is part of the claimed invention. For examination purposes, "(i.e. linear)" has not been considered.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 110-114 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumagai et al (US 6,216,953 B1, cited by applicant).

Kumagai et al teaches a multi-mode automatic laser-based bar code symbol reading device comprising: a hand-supportable housing (body 1) with a light transmission aperture (window 13 having areas 13c and 13d, see figure 101 and column 55 lines 1-14), wherethrough visible light can exit and enter the hand-supportable housing; and a laser scanning engine (light source 21, reflection mirror 26, small mirror 26', polygon mirror 22, floor mirrors 23-1 through 23-8, sensor 25), disposed within the hand-supportable housing, is controlled to selectively operate in either an omni-directional scanning mode (scanning rays a, b and c, see figure 8) or a

single line scanning mode (scan ray a, see figure 9); wherein said laser scanning engine comprises: an omni-directional laser scanning engine employing electronic control circuitry and auxiliary laser beam scan sensing apparatus so as to control the generation of laser scanning patterns during omni-directional, linear, and rastered laser scanning modes of operation (see figures 8 and 9); wherein said laser scanning engine comprises: an omni-directional laser scanning engine employing a linear laser scanning engine module; and a laser beam rastering module integrated therewith so as to control the generation of laser scanning patterns during omni-directional, linear, and rastered laser scanning modes of operation (see figures 8 and 9); wherein during an omni-directional scanning mode (figure 8), the laser scanning engine projects an omni-directional scanning pattern through the light transmission aperture, detects and decodes bar code symbols on objects passing through the omni-directional scanning pattern, and produces symbol character data representative of decoded bar code symbols; wherein during a single-line scanning mode (figure 9), the laser scanning engine projects a single line scanning patter through the light transmission aperture and detects and decodes bar code symbols on objects passing through the single line scanning pattern, and produces symbol character data representative of decoded bar code symbols (see figures 6-9, 13A-13C, 38; column 14 line 3 - column 18 line 60; column 30 lines 17-27; column 40 lines 16-33).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-3, 12-19, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al in view of Kahn et al (US 5,600,121).

Kumagai et al teaches a bar code symbol reading device, comprising: a hand-supportable housing (body 1) having a light transmission aperture (window 13 having areas 13c and 13d, see figure 101 and column 55 lines 1-14) through which visible light can exit and enter the hand-supportable housing; a laser scanning engine (light source 21, reflection mirror 26, small mirror 26', polygon mirror 22, floor mirrors 23-1 through 23-8, sensor 25), disposed within the hand supportable housing, that selectively operates in one of first and second scan modes, wherein in the first scan mode, the laser scanning engine projects an omni-directional scan pattern through the light transmission aperture (scanning rays a, b and c, see figure 8), detects and decodes bar code symbols on objects passing through the omni-directional scan pattern, and produces symbol character data representative of decoded bar code symbols, and wherein the second scan mode the laser scanning engine projects a single line scan pattern through the light transmission aperture (scan ray a, see figure 9) and detects and decodes bar code symbols on objects passing through the single line scan pattern, and produces symbol character data representative of decoded bar code symbols; a data transmission subsystem (circuitry within the reader body connected to cable 3, for example, see column 14 lines 22-27) in the hand-supportable housing that operates under control of control circuitry (control unit 225 in figure 38, for example) to

communicate the symbol character data produced by the laser scanning engine to a host device (an external unit, not shown, see column 14 lines 22-27) operably coupled to the bar code symbol reading device; a support stand (see figures 62A and 62B) that supports the hand-supportable housing, and mode selection means (detector 121) integrated with the hand-supportable housing, for selectively operating the laser scanning engine in one of the first scan mode in response to placement of the hand-supportable housing in the support stand (see column 40 lines 16-33); wherein the laser scanning engine comprises a laser light source (21), a scanning element (22) and at least one stationary mirror (23-6 or 23-8) that cooperate to project the single line scan pattern through the light transmission aperture in the second scan mode; wherein the laser scanning engine comprises a laser light source (21), a scanning element (22) and a plurality of stationary mirrors (23-1 through 23-8) that cooperate to project the omni-directional scan pattern through the light transmission aperture in the first scan mode (see figure 8); wherein the laser light source, scanning element and a predetermined subset of the plurality of stationary mirrors (mirror 23-6 or mirror 23-8, for example) of the laser scanning engine cooperate to project the single scan pattern through the light transmission aperture in the second scan mode (see figure 9); control circuitry (control unit 225) that operates, in the second scan mode, to control power of the laser light produced by the laser light source; wherein the control circuitry operates, in the second scan mode, to control the duty cycle of the laser light to selectively enable the laser light source to produce laser light only when the light produced therefrom is directed by the scanning element onto the predetermined subset of stationary mirrors (mirror 23-8);

wherein the control circuitry operates, in the second scan mode, to control power of the laser light such that the laser light source produces normal power laser light when the light produced therefrom is directed by the scanning element onto the predetermined subset of stationary mirrors (23-8), and the laser light source produces significantly lower power light when the light produced therefrom is not directed by the scanning element onto the predetermined subset of stationary mirrors (see figures 38-40, column 30 line 17 - column 31 line 6); wherein the scanning element comprises a rotating light directing element (a polygon mirror) having a rotation cycle and the control circuitry derives timing signals synchronized to a particular interval in the rotation cycle of the rotating light directing element wherein the rotating light directing element directs light produced from the laser light source onto the predetermined subset of stationary mirrors; wherein the timing signals are derived from a position sensor (221) integrated into a rotating portion of the rotating light directing element (see column 30 lines 17-26); a set of color-encoded light sources (indicators 16a and 16b) provided on the exterior of the hand-supportable housing for sequentially generating a set of visually-perceptible state indication signals that visually indicate to a user the various states of operation (for example, the state of whether or not a bar code has been read normally), wherethrough the device automatically passes during each instance of automatic bar code symbol reading in accordance with the present invention; wherein the device, when placed in the support stand, operates in the first scan mode of operation as a stationary hands-free projection scanner, and wherein the device, when removed from the support stand operates in the second scan mode of operation as a portable hand-held scanner (see

figures 6-9, 13A-13C, 38, column 14 line 3 - column 18 line 60, column 30 lines 17-27, column 40 lines 16-33).

Kumagai et al fails to specifically teach a manually-activated data transmission switch integrated with the hand-supportable housing, for producing a data transmission activation control signal in response to activation of the data transmission switch; the control circuitry enabling communication of symbol character data produced by the laser scanning engine in the second scan mode of operation to the host device upon occurrence of a first set of predetermined conditions including receipt of the data transmission activation control signal produced by the data transmission switch, and the control circuitry disabling communication of symbol character data produced by the laser scanning engine in the second mode of operation to the host device upon occurrence of a second set of predetermined conditions including lack of receipt of the data transmission activation control signal produced by the data transmission switch; wherein the control circuitry enables communication of symbol character data produced by the laser scanning engine in the first scan mode of operation to the host device irrespective of the data transmission activation control signal produced by the data transmission switch; the laser light source being a visible laser light source.

Kahn et al teaches a bar code symbol reader comprising: a hand-supportable housing (10) having a light transmission aperture (window 12) through which visible light can exit and enter the hand-supportable housing; a laser scanning engine (lasers 16 and 20, optics 18, collection optics 24, detector/array 26), disposed within the hand supportable housing, the reader selectively operating in one of first and second scan

modes, the first scan mode being a fixed mode where the reader is mounted in a stand (80), the second mode being a hand-held or portable mode where the reader is picked up by the user; a data transmission subsystem (communication unit 113) in the hand-supportable housing that operates under control of control circuitry (controller 36) to communicate the symbol character data produced by the laser scanning engine to a host device (cash register 89 and/or host computer 82, for example) operably coupled to the bar code symbol reading device; a manually-activated data transmission switch (trigger 40 incorporating dual trigger switches 70 and 71 or a single multi-position switch) integrated with the hand-supportable housing, for producing a data transmission activation control signal (for example, a signal instructing data transfer) in response to activation of the data transmission switch; the control circuitry enabling communication of symbol character data produced by the laser scanning engine in the second scan mode of operation to the host device upon occurrence of a first set of predetermined conditions including receipt of the data transmission activation control signal produced by the data transmission switch (for example, in the hand-held or portable mode, the user will actuate a switch to instruct scanning of a bar code and then actuate a switch to instruct data transfer), and the control circuitry disabling communication of symbol character data produced by the laser scanning engine in the second mode of operation to the host device upon occurrence of a second set of predetermined conditions including lack of receipt of the data transmission activation control signal produced by the data transmission switch (for example, in the fixed mode, the reader will scan a bar code and perform data transfer through electrical contacts with stand 80); wherein the

control circuitry enables communication of symbol character data produced by the laser scanning engine in the first scan mode of operation to the host device irrespective of the data transmission activation control signal produced by the data transmission switch (see figures 1-3, column 7 lines 17-67, column 8 lines 6-30, column 9 line 51 - column 10 line 9, and column 11 lines 8-43). Kahn et al also teaches the use of a visible laser light source (see column 11 lines 1-7).

In view of Kahn et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the device as taught by Kumagai et al, a manually-activated data transmission switch integrated with the hand-supportable housing, for producing a data transmission activation control signal in response to activation of the data transmission switch; the control circuitry enabling communication of symbol character data produced by the laser scanning engine in the second scan mode of operation to the host device upon occurrence of a first set of predetermined conditions including receipt of the data transmission activation control signal produced by the data transmission switch, and the control circuitry disabling communication of symbol character data produced by the laser scanning engine in the second mode of operation to the host device upon occurrence of a second set of predetermined conditions including lack of receipt of the data transmission activation control signal produced by the data transmission switch; wherein the control circuitry enables communication of symbol character data produced by the laser scanning engine in the first scan mode of operation to the host device irrespective of the data transmission activation control signal produced by the data transmission switch; the

laser light source being a visible laser light source, in order to allow the user to have greater control over the functions of the reading device.

8. Claims 4-11 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al as modified by Kahn et al further in view of Rockstein et al (US 5,260,553).

The teachings of Kumagai et al as modified by Kahn et al have been discussed above.

Kumagai et al as modified by Kahn et al fails to specifically teach a bar code symbol presence detection means in the hand-supportable housing for processing scan data so as to detect the presence of the bar code symbol on the object and to automatically generate a first control signal in response to the detection of the bar code symbol; decode processing means in the hand-supportable housing for processing scan data so as to decode the bar code symbol on the object and for automatically producing symbol character data representative of the decoded bar code symbol, and automatically generating a second control signal indicative of the production of the symbol character data; wherein the bar code symbol presence detection means detects the bar code symbol by detecting first and second envelope borders of the bar code symbol; wherein the laser scanning engine comprises object detection means in the hand-supportable housing, for detecting the objects in at least a portion of an object detection field defined relative to the housing and automatically generating a third control signal indicative of the detection of the object in at least a portion of the object detection field; control circuitry that selectively activates the bar code symbol presence

detection means and the decode processing means in response to occurrence of the third control signal; wherein the object detection means comprises a signal transmitting means for transmitting a signal towards the object in the object detection field, and a signal receiving means for receiving the transmitted signal reflected off the object in at least a portion of the object detection field, and automatically generating the third control signal indicative of the detection of the object in at least a portion of the object detection field; wherein the signal transmitting means comprises an infra-red light source/laser diode for transmitting a pulsed infra-red light/laser signal, and wherein the signal receiving means comprises an infra-red light detector/photodetector disposed in the hand-supportable housing.

Rockstein et al teaches a bar code symbol reading device (1) comprising: a hand-supportable housing (14); a bar code symbol presence detection means (5) in the hand-supportable housing for processing scan data so as to detect the presence of a bar code symbol on an object and to automatically generate a first control signal (A2) in response to the detection of the bar code symbol; decode processing means (7) in the hand-supportable housing for processing scan data so as to decode the bar code symbol on the object and for automatically producing symbol character data representative of the decoded bar code symbol, and automatically generating a second control signal (A3) indicative of the production of the symbol character data; wherein the bar code symbol presence detection means detects the bar code symbol by detecting first and second envelope borders of the bar code symbol (see column 8 lines 22-33); wherein a laser scanning engine comprises object detection means (2) in the hand-

supportable housing, for detecting the objects in at least a portion of an object detection field defined relative to the housing and automatically generating a third control signal (A1) indicative of the detection of the object in at least a portion of the object detection field (the scan field); control circuitry (11) that selectively activates the bar code symbol presence detection means and the decode processing means in response to occurrence of the third control signal; wherein the object detection means comprises a signal transmitting means (23) for transmitting a signal towards the object in the object detection field, and a signal receiving means (25) for receiving the transmitted signal reflected off the object in at least a portion of the object detection field, and automatically generating the third control signal indicative of the detection of the object in at least a portion of the object detection field; wherein the signal transmitting means comprises an infra-red light source/laser diode for transmitting a pulsed infra-red light/laser signal, and wherein the signal receiving means comprises an infra-red light detector/photodetector disposed in the hand-supportable housing (see figures 1A, 2, 3B, 8A-10, column 1 lines 10-15, column 5 lines 20-40, column 5 line 63 - column 6 line 4, column 6 lines 26-56, column 8 lines 22-33, column 11 line 61 - column 15 line 26).

In view of Rockstein et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the device as taught by Kumagai et al as modified by Kahn et al, a bar code symbol presence detection means in the hand-supportable housing for processing scan data so as to detect the presence of the bar code symbol on the object and to automatically generate a first control signal in response to the detection of the bar code symbol; decode processing

means in the hand-supportable housing for processing scan data so as to decode the bar code symbol on the object and for automatically producing symbol character data representative of the decoded bar code symbol, and automatically generating a second control signal indicative of the production of the symbol character data; wherein the bar code symbol presence detection means detects the bar code symbol by detecting first and second envelope borders of the bar code symbol; wherein the laser scanning engine comprises object detection means in the hand-supportable housing, for detecting the objects in at least a portion of an object detection field defined relative to the housing and automatically generating a third control signal indicative of the detection of the object in at least a portion of the object detection field; control circuitry that selectively activates the bar code symbol presence detection means and the decode processing means in response to occurrence of the third control signal; wherein the object detection means comprises a signal transmitting means for transmitting a signal towards the object in the object detection field, and a signal receiving means for receiving the transmitted signal reflected off the object in at least a portion of the object detection field, and automatically generating the third control signal indicative of the detection of the object in at least a portion of the object detection field; wherein the signal transmitting means comprises an infra-red light source/laser diode for transmitting a pulsed infra-red light/laser signal, and wherein the signal receiving means comprises an infra-red light detector/photodetector disposed in the hand-supportable housing, in order to provide multiple modes of fully automated operation while

conserving power and providing versatility (see column 1 lines 10-15, of Rockstein et al.)

9. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al as modified by Kahn et al further in view of Wike, Jr et al (US 5,719,385).

The teachings of Kumagai et al as modified by Kahn et al have been discussed above.

Kumagai et al as modified by Kahn et al fails to specifically teach wherein the timing signals are derived from a position indicating optical element mounted adjacent a perimeter of one of the stationary mirrors, such that the position indicating optical element is illuminated by light produced from the laser light source when the rotating light directing element reaches a predetermined point in its rotation; wherein the position indicating optical element comprises a mirror that directs illumination incident thereon to a position indicating optical detector, which generates an electrical signal whose amplitude corresponds to the intensity of light incident thereon.

Wike, Jr et al teaches a bar code symbol reading device (10), including: deriving timing signals from a position indicating optical element (a position indicating reflector, see column 3 line 66 - column 4 line 2) mounted adjacent a perimeter of a stationary mirror (one of pattern mirrors 16), such that the position indicating optical element is illuminated by light produced from a laser light source (12) when a rotating light directing element (rotating reflector 14) reaches a predetermined point in its rotation; wherein the position indicating optical element comprises a mirror (a position indicating reflector)

that directs illumination incident thereon to a position indicating optical detector (a position indicating detector, see column 4 lines 2-6), which generates an electrical signal whose amplitude corresponds to the intensity of light incident thereon (see figure 1 and column 3 line 13 - column 4 line 6).

In view of Wike, Jr et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the device as taught by Kumagai et al as modified by Kahn et al, wherein the timing signals are derived from a position indicating optical element mounted adjacent a perimeter of one of the stationary mirrors, such that the position indicating optical element is illuminated by light produced from the laser light source when the rotating light directing element reaches a predetermined point in its rotation; wherein the position indicating optical element comprises a mirror that directs illumination incident thereon to a position indicating optical detector, which generates an electrical signal whose amplitude corresponds to the intensity of light incident thereon, since an optical position detecting sensor is an art recognized functional equivalent to other position detecting sensors/systems (see column 3 line 62 - column 4 line 6).

10. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al as modified by Kahn et al and Wike, Jr et al further in view of Traub (US 3,911,270).

The teachings of Kumagai et al as modified by Kahn et al and Wike, Jr et al have been discussed above.

Kumagai et al as modified by Kahn et al and Wike, Jr et al fails to specifically teach wherein the position indicating optical element comprises a light collecting lens that is operably coupled to a light guide to direct illumination on the light collecting lens to a position indicating optical detector, which generates an electrical signal whose amplitude corresponds to the intensity of light incident thereon; wherein the light guide comprises a fiber optic bundle.

Traub teaches a reading device (10) comprising: a light collecting lens (22) that is operably coupled to a light guide (26) to direct illumination on the light collecting lens to an optical detector (21), which generates an electrical signal whose amplitude corresponds to the intensity of light incident thereon; wherein the light guide comprises a fiber optic bundle (the light guide 26 is an optical fiber) (see figure 1 and column 2 lines 25-46).

In view of Traub's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the device as taught by Kumagai et al as modified by Kahn et al and Wike, Jr et al, a light collecting lens that is operably coupled to a light guide to direct illumination on the light collecting lens to a position indicating optical detector, which generates an electrical signal whose amplitude corresponds to the intensity of light incident thereon; wherein the light guide comprises a fiber optic bundle; in order to allow greater flexibility in the mounting of the position indicating optical detector, since the use of a light guide does not require a direct line of sight between the reflector and the detector.

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumagai et al as modified by Kahn et al further in view of the admitted prior art.

The teachings of Kumagai et al as modified by Kahn et al have been discussed above.

Kumagai et al as modified by Kahn et al and Rockstein et al fails to specifically teach the control circuitry comprising a 555 timer integrated circuit configured for mono-stable operation.

However, applicants admit that the use of control circuitry comprising a 555 timer integrated circuit configured for mono-stable operation was well known to those of ordinary skill in the art at the time of the invention (see page 42 lines 25-27).

In view of the admitted prior art teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the device as taught by Kumagai et al as modified by Kahn et al, the control circuitry comprising a 555 timer integrated circuit configured for mono-stable operation, in order to utilize proven and reliable circuitry, thereby increasing the dependability of the device.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dvorkis et al (US 2002/0139855 A1), Tamburrini (US 5,962,838), Asai (JP 11-203397 A) all teach bar code symbol reading devices having multiple scan patterns. Bassett (US 5,132,523) teaches changing the mode of an optical scanner upon placing the optical scanner on a stand. Apitz et al (US 4,465,926) teaches an optical reading device having a manually-activated data transmission switch. Wilz, Sr.

et al (US 6,595,420 B1), Wilz, Sr. et al (US 6,637,659 B2), Wilz, Sr. et al (US 6,607,133 B2), Nomura et al (JP 2-154598 A), and Nojima (JP 2002-290607 A) all teach bar code reading systems having a data transmission activation switch. Longacre, Jr. et al (US 2003/0146283 A1) teaches an optical reader with a scanning trigger. Byun et al (US 2002/0100804 A1) and Knighton et al (US 6,315,204 B1) both teach optical scanners including a scanner activation/data transmission switch. Meksavan et al (US 6,547,146 B1) teaches a bar code scanner having a switch for transmitting stored data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared J. Fureman whose telephone number is (571) 272-2391. The examiner can normally be reached on 7:00 am - 4:30 PM M-T, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jared J. Fureman
Examiner
Art Unit 2876

April 4, 2004